REMARKS

Claims 1, 3-6 and 10 are now in this Application, and are presented for the Examiner's consideration.

Request for Two Month Extension of Time

Applicant hereby requests that the period for responding to the Office Action mailed July 3, 2007, set to expire on October 3, 2007, be extended by two (2) months, so as to expire on December 3, 2007. Applicant is a large entity.

Payment is being made with this Amendment.

Examiner Interview

Before discussing the specific rejections, the undersigned would like to thank the Examiner for the courteous telephone interview afforded the undersigned on October 2, 2007.

In that interview, three proposals were presented, namely:

A) First Proposal: As to the imaginary radius and the objected to "method limitation", amending claim 1 to recite:

> "at least two movable rollers following the fixing roller and on a same side of said optical fiber as said fixing roller, said at least two movable rollers having axial centers which are movable to different positions, respectively, so that a curvature of an imaginary circle defined by three points of contact of the optical fiber with

the fixing roller and the at least two movable rollers when the optical fiber ~~which~~ is in contact with and drawn around the movable rollers and the fixing roller has a radius larger than a radius of any of the rollers in order to release bending stress and stress concentration in the optical fiber and thereby decrease a possibility of breakage of the optical fiber.

It was explained that any three points (not lying in a straight line) can be used to define a circle. This is basic geometry. If we define three points as the points of the optical fiber in contact with the rollers, we can then define an imaginary circle.

B) Second Proposal: It was suggested that this language of the radius be deleted entirely on the basis that the limitation is inherent by the mere recitation of the structure in the claim, so that the paragraph would read:

"at least two movable rollers following the fixing roller and on a same side of said optical fiber as said fixing roller, said at least two movable rollers having axial centers which are movable to different positions, respectively, ~~so that a curvature of the optical fiber which is in contact with and drawn around the movable rollers and the fixing roller has a radius larger than a radius of any of the rollers~~ in order to release bending stress and stress

concentration in the optical fiber and thereby decrease a possibility of breakage of the optical fiber."

Since the structure is recited, the result would naturally occur from such structure so that the result of the curvature of the optical fiber which is in contact with and drawn around the movable rollers and the fixing roller having a radius larger than a radius of any of the rollers, can be deleted.

C) Third Proposal: As to the last paragraph in claim 1, it was suggested that it be amended to recite:

"at least two brackets, each bracket connected to a respective one of said at least two movable rollers to provide ~~translation~~ movement of the respective one of said at least two movable rollers in at least two different directions ~~one translation direction~~ relative to the optical fiber, and independent and separate from movement of the other ~~of each~~ movable roller ~~relative to the other~~."

The Examiners comments regarding these proposals are set forth in the Interview Summary mailed October 10, 2007.

With the above in mind, the specific prior art rejection will now be discussed.

Rejection of Claims under 35 U.S.C. §101

Claims 1 and 3-6 were rejected under 35 U.S.C. §101 on the basis that the claimed invention is directed to non-statutory

subject matter.

It was stated that a single claim which claims both apparatus and method steps is indefinite.

However, the present claim is directed to a specific apparatus, and it is permissible to define an element with respect to a function that it performs. Specifically, it was stated that claim 1 requires a step of drawing a fiber, and in this regard, the Examiner refers to the language "the optical fiber which is ... drawn around the movable rollers."

However, it is clear that claim 1 does not require a step of drawing, but merely recites that the curvature of the optical fiber has a radius larger than a radius of any of the rollers when the optical fiber is drawn around the movable roller and the fixing roller. There is no method step required, but this merely refers to the radius at a specific occurrence or condition.

However, in order to advance prosecution, claim 1 has been amended to recite "... so that a curvature of an imaginary circle defined by three points of contact of the optical fiber with the fixing roller and the at least two movable rollers when the optical fiber is in contact with and drawn around the movable rollers and the fixing roller ..." This indicates that the extending around is an occurrence, rather than a method limitation.

Accordingly, it is respectfully submitted that the rejection of claims 1 and 3-6 under 35 U.S.C. §101, has been overcome.

Rejection of Claims under 35 U.S.C. §112

Claims 1 and 3-6 were rejected under 35 U.S.C. §112, first paragraph.

First, it was stated that claim 1 is indefinite because it claims a method step. For the reasons given above, and the amendment made to claim 1, it is submitted that this rejection has been overcome.

It was further stated that it is unclear what the claim requires in regard to the drawing since there is no antecedent basis for the optical fiber which is in contact with and drawn around the movable rollers and the fixing rollers.

However, applicants submit that the optical fiber drawn around the movable rollers and the fixing rollers is merely a condition to define the radius, and this is discussed above. Therefore, for the same reasons given above, it is submitted that this rejection has been overcome.

More importantly, it was stated that the term "radius" is indefinite as to its meaning since the loose fiber has a curved surface that is not exactly a circle. Further, it was stated that if one were to pull the fiber tight, the fiber would not curve between the rollers. This is the real crux of the

rejection and which rejection has been asserted throughout the prosecution. In other words, the Examiner is asserting that, because of the point contact of the fiber at the roller surfaces, the fiber would be linearly arranged between any two rollers and would not form a circle.

Of course, this is true since the fiber is not loose around the rollers. It is submitted that one of ordinary skill in the art would clearly understand this.

However, it is also clear that radius R2 in Fig. 3 is an imaginary circle that extends around the three rollers. The claims need only be written so that one of ordinary skill in the art would understand the same. It is submitted that one of ordinary skill in the art would clearly understand this. The imaginary circle is similar to the radius of the optical fiber.

In this regard, claim 1 has been amended to recite "... so that a curvature of an imaginary circle defined by three points of contact of the optical fiber with the fixing roller and the at least two movable rollers when the optical fiber ~~which~~ is in contact with and drawn around the movable rollers and the fixing roller has a radius larger than a radius of any of the rollers ..." Again, it is submitted that this is absolutely clear from Fig. 3 and that one of ordinary skill in the art would understand this to be the case from the specification. This limitation corresponds to first proposal A) mentioned above in regard to the

Examiner interview.

In addition, a new independent claim 10 has been added in which this limitation has been deleted entirely.

Accordingly, it is respectfully submitted that the rejection of claims 1 and 3-6 under 35 U.S.C. §112, first paragraph.

Claims 1 and 3-6 were rejected under 35 U.S.C. §112, second paragraph, as failing to set forth the subject matter which applicant regards as the invention.

The Examiner specifically refers to the last-filed Amendment which was filed on June 7, 2007, in which applicant stated that the moving rollers 18, 19 must be able to move, respectively, in different directions while guiding the fiber and that this statement indicates that the invention is different from what is defined in the claims because the last paragraph of claim 1 only specifies that the rollers move in one direction.

In order to advance prosecution, claim 1 has been amended to recite movement in two different offset directions. The term offset is being used in the manner of the definition in the Random House Unabridged Dictionary, Second Edition, 1987, as "placed at an angle to something, as to the axis of a form, shape or object; not parallel." This is to emphasize that the two different directions are not the up and down movements along the same vertical line, but rather, are not parallel directions.

This corresponds to Fig. 3 of the present application which shows the two movements being orthogonal to each other in the X and Y directions.

Thus, the last paragraph of claim 1 has been amended to recite:

"at least two brackets, each bracket connected to a respective one of said at least two movable rollers to provide movement of the respective one of said at least two movable rollers in at least two different offset directions relative to the optical fiber, and independent and separate from movement of the other movable roller."

This corresponds to the third proposal C) mentioned above in regard to the Examiner interview.

New independent claim 10 also includes this language.

Thus, claim 1 has been amended to include the first and third proposals A) and C) mentioned above in regard to the Examiner interview, while new claim 10 includes the second and third proposals B) and C) mentioned above in regard to the Examiner interview.

Accordingly, it is respectfully submitted that the rejection of claims 1 and 3-6 under 35 U.S.C. §112, second paragraph, has been overcome.

Further, claims 1 and 3-6 were further rejected under 35 U.S.C. §112, first paragraph, because the specification, while being enabling for moving the rollers in two directions, does not reasonably provide enablement for moving the rollers in only one direction.

However, as discussed above, claim 1 has been amended to recite movement in two different offset directions.

Accordingly, it is respectfully submitted that the rejection of claims 1 and 3-6 under 35 U.S.C. §112, first paragraph, has been overcome.

Prior Art Rejections

Claims 1 and 3-6 were rejected under 35 U.S.C. §103(a) as being obvious from U.S. Patent No. 6,519,404 to Yoshida and U.S. Statutory Invention Registration No. H1268 to Askins et al and further in view of Butterworth-Heinemann (Dictionary of Engineering Terms) and Sclater et al.

In Yoshida et al, the only rollers that move in a translation direction, rather than a swinging sense, are rollers 4 and 5 in Fig. 2. Guide rollers 4 and 5, however, only move together between the lower position 4', 5' and the upper position 4, 5 in Fig. 2. There is no disclosure or suggestion that they are independently mounted on different brackets for separate movement, for example, in different offset directions. In fact,

Yoshida et al states at column 6, lines 39-41 that "[t]he movement of the movable guide rollers can be implemented, for example, by use of a guide rail and a chain not illustrated" (emphasis added). In other words, there is a single guide rail for both rollers 4, 5 in Yoshida et al, because both rollers 4, 5 are moved in the same direction, at the same time, and for the same distance. Yoshida et al does not teach separate brackets for independently moving rollers 4, 5, but rather, teaches using a single guide rail for both rollers 4, 5.

With the present invention, the optical fiber between the fixing roller and the winding apparatus is substantially circular. To achieve this object, the moving rollers 18, 19 must be able to move, respectively:

a) in different offset directions while guiding the fiber, and

b) separate from movement of the other movable roller.

Thus, each roller 18, 19 is separately mounted on a separate bracket 10 which thereby permits movement of rollers 18, 19 in two different offset directions.

For support for this limitation, see, for example, page 13, lines 4-6 of the present application, which discloses a plurality of brackets 10 which may be provided after the fixing roller in order to reciprocate the moving rollers 18, 19.

As discussed above, Yohsida et al does not disclose or even remotely suggest that the two moving rollers are mounted for separate movement, respectively, in two different offset directions, in order to reduce the stress on the fiber. This was admitted by the Examiner in the Office Action. See page 6, last paragraph of the Office Action.

Further, there would not be any need to do so in Yoshida et al since Yoshida et al is not concerned with providing a circular path of travel for the fiber, but rather, rollers 4, 5 are provided to increase the length of the free zone, and thereby provide a greater length over which the optical fiber can untwist. Thus, there is no suggestion in Yoshida et al, nor any logical reason, to provide separate movement of rollers 4, 5 in two different offset directions. In fact, separate movement of rollers 4, 5 in different directions may result in more twisting of the fiber, contrary to the teachings of Yoshida et al, such that Yoshida et al would teach away from separate movement of rollers 18, 19.

Thus, each roller 18, 19 of the present invention is mounted to a separate bracket 10. The specification teaches that each roller 18, 19 can move in a translation direction in a slot or vertical direction guide 21 of the respective bracket 10, and also, each bracket 10 can pivot around pivot joint 22. Thus, each roller 18, 19 is movable in two different offset X- and Y-

directions in translation, separately from each other.

This is also distinguished from roller 23 of Yoshida et al, for example, which only rotates about its own axis as shown in Fig. 4 thereof, and does not move in a translation direction.

It must be also pointed out that it is not just the fact that two rollers can be moved independently, but rather, the fact that two rollers can move on separate brackets, and thereby independently of each other in the context of the present claimed invention of an optical fiber drawing apparatus.

In Askins, L-shaped bracket 62 was noted for mounting two idler rollers 60. However, the idler rollers 60 are both mounted on the same bracket 62. See column 5, lines 58-63. Thus, if bracket 62 is moved, both idler rollers 60 move therewith. Therefore, even if Askins et al is combined with Yoshida et al, the claimed present invention would still not be disclosed or suggested in which there are at least two brackets, each bracket connected to a respective one of said at least two movable rollers to provide movement of the respective one of said at least two movable rollers in at least two different offset directions relative to the optical fiber, and independent and separate from movement of the other movable roller.

Askins was relied upon to show it is not an invention to use a bracket and that it would have been obvious to provide a single bracket for each wheel, with no new, unexpected result for

additional adjustability or for mere duplication of parts. The Examiner states that it also would have been obvious to separate the single bracket into two separate brackets, so that a person could separate one from the other, to make replacement of only one wheel more quickly.

However, the case law makes it clear that, for such a modification, there must be some suggestion in the art or some logical reason to do so. The Examiner has failed to indicate anywhere in the art of record where there is a suggestion to so modify the reference. Further, the logical reason to do so must be without regard to impermissible hindsight using applicant's own invention disclosure. The Examiner has failed to indicate why one skilled in the art would want to modify the reference, since there appears to be no logical reason, absent the teachings of the present application.

As discussed above, Askins et al shows a single bracket 62 for mounting two idler rollers 60. Further, as discussed above, in Yoshida et al, guide rollers 4 and 5, only move together between the lower position 4', 5' and the upper position 4, 5 in Fig. 2. Thus, there is no logical reason to provide two brackets, one for each roller, to provide independent adjustment, since neither Yoshida et al nor Askins et al provides for such independent adjustment. Such modification is unwarranted by the references, and constitutes impermissible hindsight.

In this regard, claim 1 recites "at least two brackets, each bracket connected to a respective one of said at least two movable rollers to provide movement of the respective one of said at least two movable rollers in at least two different offset directions relative to the optical fiber, and independent and separate from movement of the other movable roller."

This aspect is nowhere disclosed or even remotely suggested by either reference.

Butterworth-Heinemann was merely cited for disclosing a CAM that can be used to impart motion on a mating component. Sclater et al was merely cited for disclosing a roller device with a groove in a bracket. However, neither of these references cure the aforementioned deficiencies of Yoshida et al and Askins et al.

Accordingly, it is respectfully submitted that the rejection of claims 1 and 3-6 under 35 U.S.C. §103(a) has been overcome.

Entry of claims for appeal

Because the present Office Action is final, and because of the long and protracted prosecution, if the Examiner does not indicate allowance of any of the claims, the Examiner is requested to enter the present Amendment for appeal purposes.

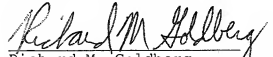
If the Examiner has any comments, questions, objections or recommendations, the Examiner is invited to telephone the undersigned at the telephone number given below for prompt action.

In the event that this Paper is late filed, and the necessary petition for extension of time is not filed concurrently herewith, please consider this as a Petition for the requisite extension of time, and to the extent not tendered by check attached hereto, authorization to charge the extension fee, or any other fee required in connection with this Paper, to Account No. 07-1524.

The Commissioner is authorized to charge any additional fees which may be required, or credit any overpayment to Deposit Account No. 07-1524.

In view of the foregoing amendments and remarks, it is respectfully submitted that Claims 1, 3-6 and 10 are allowable, and early and favorable consideration thereof is solicited.

Respectfully submitted,



Richard M. Goldberg
Attorney for Applicants
Registration No. 28,215

25 East Salem Street
Suite 419
Hackensack, New Jersey 07601
TEL (201) 343-7775
FAX (201) 488-3884
e-mail: goldbergpat@earthlink.net